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# State of Utah

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
801-538-5340

November 13, 1989

TO: Board of Oil, Gas and Mining

THRU: Lowell P. Braxton, Associate Director, Mining *LPB*

FROM: Holland Shepherd, Reclamation Specialist, Permit Lead *HOS*

RE: Request for Approval of New Form and Amount of Surety, for the Snow Mine, M/015/013, and the Four Corners Mine, M/015/014, San Rafael Energy, Inc., Emery County, Utah

San Rafael Energy, Inc. of Moab, has recently purchased two mine sites located close to Green River, Utah, from Atlas Minerals. The Board's approval for the operator's submitted surety will allow for the completion of the transfer.

Atlas's existing surety is a reclamation contract for \$83,286 at the Snow and \$137,775 at the Four Corners site. The new surety is for \$9,000 at the Snow and \$7,000 at the Four Corners site.

The reason such a large difference exists between these sureties is that the sites were initially permitted for much larger acreages than what was actually disturbed, 21 acres at the Snow and 34 acres at the Four Corners. The current disturbances are 12.2 acres at the Snow and 6.8 acres at the Four Corners. Also, the operator has recently performed a partial reclamation at the site. Partial reclamation included regrading and seeding of 4.8 acres at the Four Corners and 8.2 acres at the Snow. The operator intends to eventually refile under a Small Mining Operation once revegetation has proved successful.

Please find attached for your evaluation:

- 1) Summary checklist
- 2) Location maps
- 3) Reclamation surety cost estimates
- 4) Reclamation contract
- 6) Executive Summary
- 7) Reclamation Sureties

MN4/175

DOGM MINERALS PROGRAM

CHECK LIST FOR BOARD APPROVAL  
OF  
FORM AND AMOUNT OF SURETY

Mine Name Snow

File No. M/015/013

Item	Provided		Remarks
	Yes	No	
Executive Summary	X		
Location Map	X		
Reclamation Bond Estimate	X		
Signed Reclamation Contract	X		
Signed Power of Attorney/ Affidavit of Qualification		X	N/A
Bond/Reclamation Surety	X		\$9,000 Savings Certificate
Surety Signoff (Other State/Federal Agencies)		X	BLM asked only to be updated on this sites status

## EXECUTIVE SUMMARY

<b>Mine Name:</b>	<u>Snow Mine</u>	<b>I.D. No.:</b>	<u>M/015/013</u>
<b>Operator:</b>	<u>San Rafael Energy, Inc.</u>	<b>County:</b>	<u>Emery</u>
	<u>P. O. Box 805</u>	<b>New/Existing:</b>	<u>Existing</u>
	<u>Moab, Utah 84532</u>	<b>Mineral Ownership:</b>	<u>BLM</u>
		<b>Surface Ownership:</b>	<u>BLM</u>
<b>Telephone:</b>	<u>801-259-5670</u>	<b>Lease No.(s):</b>	<u>None</u>
<b>Contact Person:</b>	<u>Joe D. Bierschied</u>	<b>Permit Term:</b>	<u>Life of Mine</u>
<b>Life of Mine:</b>	<u>Indefinite</u>		

**Legal Description:** NE1/4, SE1/4, Section 22, T21S, R14E

**Mineral(s) to be Mined:** Uranium

**Mining Methods:** Underground Room and Pillar

**Acres to be Disturbed:** 12.2

**Present Land Use:** Mining, wildlife, grazing

**Postmining Land Use:** Wildlife and livestock

**Variances from Reclamation Standards (Rule M-10) Granted:** None

### SOILS and GEOLOGY:

**Soil Description:** Soils are shallow and well-drained, with slow permeability and moderate erosion potential.

**pH:** \_\_\_\_\_

**Special Handling Problems:** None

**Geology Description:** The mine is located at the 4,400 foot elevation on the Mancos Shale Formation. The workings occur in the Salt Wash member of the Morrison.

### HYDROLOGY:

**Groundwater Description:** The mine does produce water. During mining a pond will be constructed to contain pumped mine water.

**Surface Water Description:** There are no natural water bodies on or adjacent to the site. Surface runoff drains into an ephemeral drainage near the mine.

**Water Monitoring Plan:** \_\_\_\_\_

**ECOLOGY:**

**Vegetation Type(s); Dominant Species:** Shadescale, Indian Ricegrass, Russian Thistle, Halogeton

**Percent Surrounding Vegetative Cover:** < 5% - very sparsely vegetated

**Wildlife Concerns:** None

**Surface Facilities:** Shop and office facilities; shaft and hoist; ventilation bore hole; access road.

**Mining and Reclamation Plan Summary:** \_\_\_\_\_

**During Operations:**

1. Mining will be conducted in a safe, orderly, and minerlike fashion.

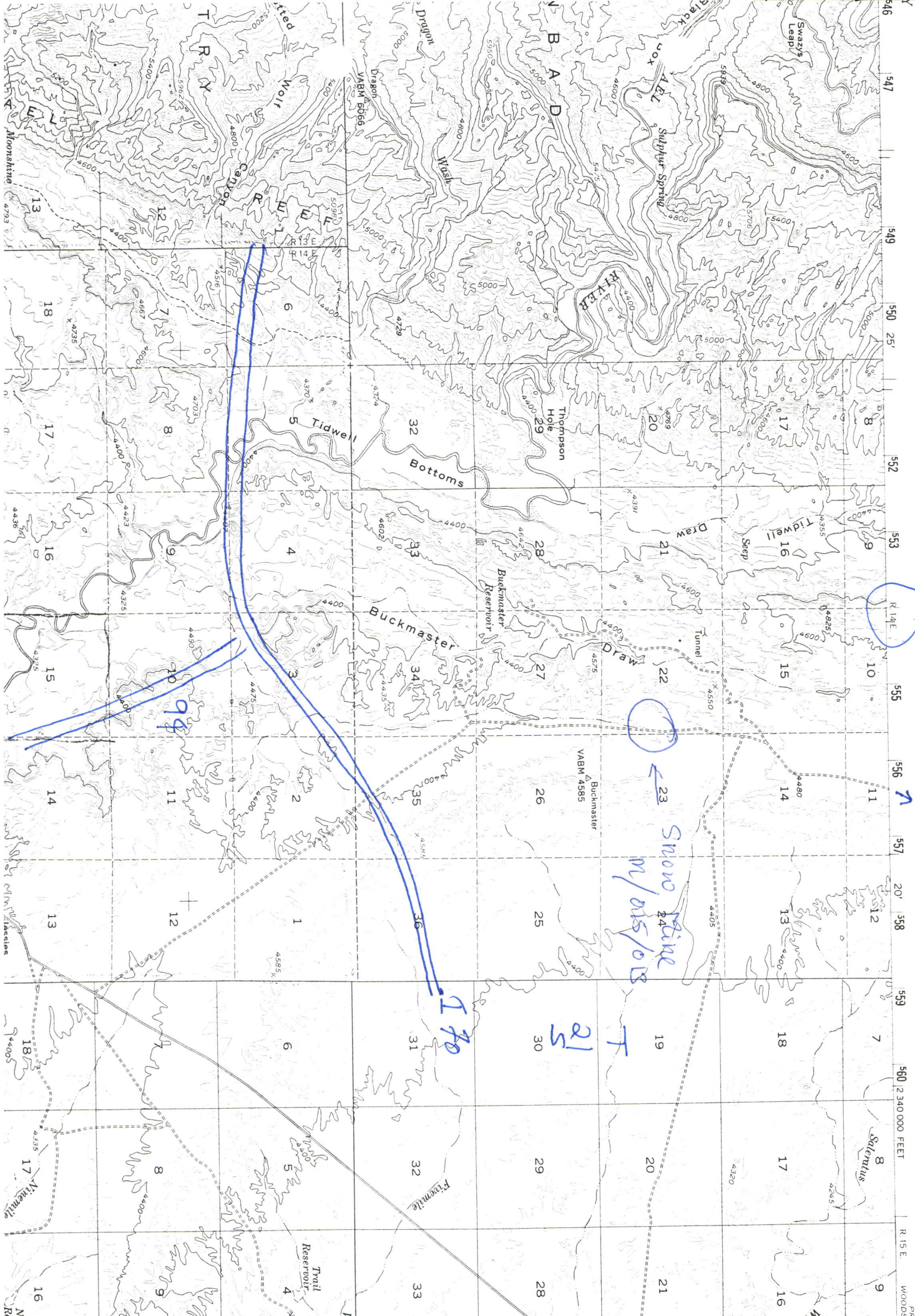
**After Operations:**

1. Extraneous debris, scrap metal and wood, and unusable buildings will be removed from the surface of the site.
2. The shaft and ventilation holes will be sealed with reinforced concrete to prevent accidental or unauthorized entry.
3. Waste rock piles and remaining stockpiles will be stabilized through regrading and establishing vegetation through seeding with specified species.
4. Surface drainage contours will be established for prevention of water ponding.
5. Compacted surfaces will be scarified and the mine site will be stabilized by establishing specified plant species through seeding.
6. The main access road and mine water pond area will be regraded and a vegetative cover will be established through scarifying and seeding.

**SURETY:**

Amount: \$9,000  
Form: Savings Certificate  
Renewable Term: 12 months (automatic)







## Reclamation Estimate for the Atlas Minerals Snow Mine M/015/013

Prepared By  
Utah State Division of Oil, Gas and Mining  
May 23, 1989 Revised July 14, 1989

Description	Quantity	Unit	\$/Unit	Total Cost (\$)
<b>Facilities Reclamation</b>				
Demolish and Dispose of Buildings	4,100	Square Feet	2.9	(a)
Demolish and Dispose of Water Tanks		Lump Sum		2,000
Demolish and Dispose of Head Frame		Lump Sum		1,500
Remove Trash	4	Acres	100	400
Grade for Uniformity	4	Acres	400	1,600
Revegetate	4	Acres	175	700
Subtotal				6,200
<b>Completed Partial Reclamation (b)</b>				
Revegetate	8.2	Acres	175	1,430
Totals				7,630
Add Contingency (10%)				760
TOTAL RECLAMATION COST (1989 Dollars)				8,390
TOTAL RECLAMATION COST (1991 Dollars) @ 1.93% Annual Inflation				9,000

Note: (a) The operator has provided a third party estimate indicating the salvage value exceeds the reclamation cost.  
(b) Most of the area (8.2 acres) was reclaimed during 1988. The surety is estimated through 1991 (3 growing seasons).

Revegetation Cost per Acre	Quantity	Unit	\$/Unit	Total Cost (\$)
<b>Bare Costs</b>				
Seed Mix	19	Pounds	7.37	140
<b>Application Costs</b>				
Seed Mix (broadcast by hand)	0.5	Hours	24	12
Scarify (tractor with chain)	0.3	Hours	67	23
Subtotal				35
Total Revegetation Cost per Acre				175

NON-NEGOTIABLE  
NON-TRANSFERABLE

SAVINGS CERTIFICATE  
FIRST WESTERN NATIONAL BANK

No 10804 35

Moab, Utah 84532 Oct. 12 19 89 \$9,000.00\*\*

THIS IS TO CERTIFY THAT \*\*\*\*\*Utah State Division of Oil, Gas & Mining\*\*\*\*\*  
HEREIN CALLED REGISTERED OWNER(S) HAS DEPOSITED IN THE FIRST WESTERN NATIONAL BANK

FIRST WESTERN NATIONAL BANK 9000 DOLS 00 CTS

THE SUM OF \_\_\_\_\_ DOLLARS  
payable to the registered owner(s) upon presentation and surrender of this certificate properly endorsed 12 months after date, with interest  
at the rate of 7.500 percent per annum from date.

This certificate will be automatically renewed at maturity for additional successive periods of 12 months each, unless presented for payment by the registered owner(s) within 10 days after a maturity date for payment as of such maturity date. The bank reserves the right to renew this certificate at any maturity date upon mailing to the registered owner(s) at his address last shown on the bank's records a notice of its election not to renew.

Shane Serigh  
(Authorized Signature)

THIS DEPOSIT IS NOT SUBJECT TO CHECK

DOGM MINERALS PROGRAM

CHECK LIST FOR BOARD APPROVAL  
OF  
FORM AND AMOUNT OF SURETY

Mine Name Four Corners

File No. M/015/014

Item	Provided		Remarks
	Yes	No	
Executive Summary	X		
Location Map	X		
Reclamation Bond Estimate	X		
Signed Reclamation Contract	X		
Signed Power of Attorney/ Affidavit of Qualification		X	N/A
Bond/Reclamation Surety	X		\$7,000 Savings Certificate
Surety Signoff (Other State/Federal Agencies)		X	BLM asked only to be updated on this sites status

MN88/7



## EXECUTIVE SUMMARY

<b>Mine Name:</b>	<u>Four Corners Mine</u>	<b>I.D. No.:</b>	<u>M/015/014</u>
<b>Operator:</b>	<u>San Rafael Energy, Inc.</u>	<b>County:</b>	<u>Emery</u>
	<u>P. O. Box 805</u>	<b>New/Existing:</b>	<u>Existing</u>
	<u>Moab, Utah 84532</u>	<b>Mineral Ownership:</b>	<u>BLM</u>
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<b>Contact Person:</b>	<u>Joe D. Bierschied</u>	<b>Permit Term:</b>	<u>Life of Mine</u>
<b>Life of Mine:</b>	<u>Indefinite</u>		

**Legal Description:** E1/2, NW1/4, Section 22, T21S, R14E

**Mineral(s) to be Mined:** Uranium

**Mining Methods:** Underground Room and Pillar

**Acres to be Disturbed:** ~~12.2~~ 6.8 <sup>403</sup>

**Present Land Use:** Mining

**Postmining Land Use:** wildlife and Domestic Grazing

**Variances from Reclamation Standards (Rule M-10) Granted:** None

### SOILS and GEOLOGY:

**Soil Description:** Poorly developed dry soils. Parent material composed predominantly of Mancos Shale, moderate erosion potential.

**pH:** 8.2 to 8.6

**Special Handling Problems:** None

**Geology Description:** The mine is located in the Mancos Shale Formation. The workings are located in the Salt Wash member of the Morrison Formation.

### HYDROLOGY:

**Groundwater Description:** The mine does contact groundwater at certain locations underground.

**Surface Water Description:** The natural bodies of surface water exist on site.

**Water Monitoring Plan:** None

**ECOLOGY:**

**Vegetation Type(s); Dominant Species:** Saltbush, Indian Ricegrass, Halogeton, Russian Thistle, Shadescale.

**Percent Surrounding Vegetative Cover:** < 5% - Very sparse.

**Wildlife Concerns:** None

**Surface Facilities:** Ventilation bore hole; shop and office facility (1 bldg.); 1 decline.

**Mining and Reclamation Plan Summary:** \_\_\_\_\_

At Reclamation:

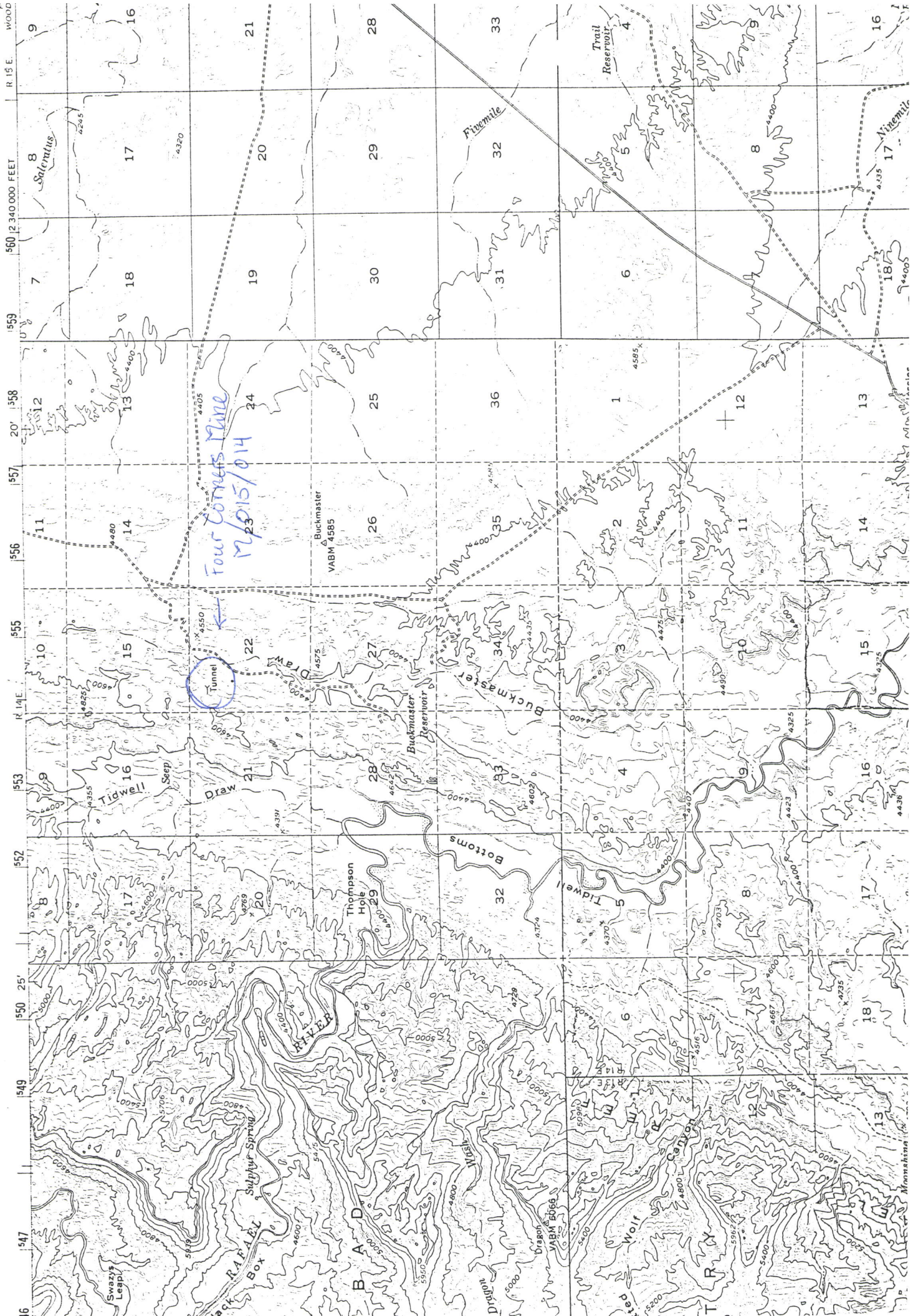
1. Extraneous debris, scrap metal and wood, and unusable buildings will be removed from the surface of the site.
2. Decline and ventilation hole to be sealed with reinforced concrete to prevent accidental or unauthorized entry.
3. Waste rock piles and remaining stockpiles will be stabilized through regrading and establishing vegetation through seeding.
4. Surface drainage contours will be established to prevent water ponding.
5. Compacted surfaces will be scarified and the mine site will be stabilized by establishing specified plant species through seeding.

**SURETY:**

Amount: \$7,000  
Form: Savings Certificate  
Renewable Term: 12 months (automatic)

MN13/33-34







## Reclamation Estimate for the Atlas Four Corners Mine M/015/014

Prepared By  
Utah State Division of Oil, Gas and Mining  
May 23, 1989 Revised July 14, 1989

Description	Quantity	Unit	\$/Unit	Total Cost (\$)
<b>Facilities Reclamation</b>				
Demolish and Dispose of Buildings	3,500	Square Feet	2.9	(a)
Plug and Cover Vent Hole (24 inch)		Lump Sum		2,000
Install Bulkhead 100 feet Inside Portal		Lump Sum		1,200
Backfill Decline to Bulkhead	600	Cubic Yards	0.60	360
Remove Trash	2	Acres	100	200
Grade for Uniformity	2	Acres	400	800
Revegetate	2	Acres	175	350
Subtotal				4,910
<b>Completed Partial Reclamation (b)</b>				
Revegetate	4.8	Acres	175	840
Totals				5,750
Add Contingency (10%)				580
TOTAL RECLAMATION COST (1989 Dollars)				6,330
TOTAL RECLAMATION COST (1991 Dollars) @ 1.93% Annual Inflation				7,000

- Note: (a) The operator has provided a third party estimate indicating the salvage value exceeds the reclamation cost.  
(b) Most of the area (4.8 acres) was reclaimed during 1988. The surety is estimated through 1991 (3 growing seasons).

Revegetation Cost per Acre	Quantity	Unit	\$/Unit	Total Cost (\$)
<b>Bare Costs</b>				
Seed Mix	19	Pounds	7.37	140
<b>Application Costs</b>				
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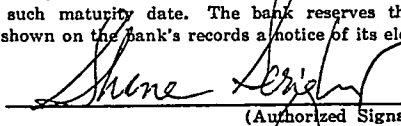
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(Authorized Signature)

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